

INTERNATIONAL SEARCH REPORT

 national application No
 PCT/CA 03/01520

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C23C18/02 C23C20/08 C04B41/50 C04B41/52 C03C17/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C23C C04B C03C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|---|
| X Y | US 5 711 987 A (BEARINGER CLAYTON R ET AL) 27 January 1998 (1998-01-27) the whole document | 1,5-13, 19-25,41 2-4, 14-18, 26-40,42 |
| X Y | EP 1 069 074 A (N T S CORP ;RYOWA CORP (JP)) 17 January 2001 (2001-01-17) abstract paragraphs '0017!-'0021!, '0036!, '0037! -/-- | 1-6, 26-36,41 2-4, 14-18, 26-40,42 |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

16 February 2004

Date of mailing of the international search report

27/02/2004

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 03/01520

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|---|---------------------|---|--|
| US 5711987 | A | 27-01-1998 | EP 0834918 A1 JP 10113610 A TW 396391 B US 6144106 A | 08-04-1998 06-05-1998 01-07-2000 07-11-2000 |
| EP 1069074 | A | 17-01-2001 | JP 2000191943 A DE 60001127 D1 DE 60001127 T2 EP 1069074 A1 US 6383270 B1 | 11-07-2000 13-02-2003 17-07-2003 17-01-2001 07-05-2002 |
| US 5626923 | A | 06-05-1997 | AU 7363096 A WO 9711040 A1 | 09-04-1997 27-03-1997 |
| US 5710203 | A | 20-01-1998 | US 5458912 A US 5916944 A DE 69426998 D1 DE 69426998 T2 EP 0615000 A1 JP 6345417 A US 5387480 A US 5635249 A US 5492958 A US 5541248 A | 17-10-1995 29-06-1999 10-05-2001 31-10-2001 14-09-1994 20-12-1994 07-02-1995 03-06-1997 20-02-1996 30-07-1996 |
| US 4931413 | A | 05-06-1990 | WO 8803519 A1 CA 1268785 A1 | 19-05-1988 08-05-1990 |
| DE 3928845 | A | 07-03-1991 | DE 3928845 A1 AU 6291290 A WO 9103266 A1 | 07-03-1991 08-04-1991 21-03-1991 |